

List of Figures

Fig. 2.1 Raster and Vector data	6
Fig. 2.2 OGC Web Service Architecture	8
Fig. 5.1 System Architecture	20
Fig. 5.2 Development Steps	21
Fig. 5.3 Context Diagram	22
Fig. 5.4 First level DFD	22
Fig. 5.5 Second level DFD for admin plot report	23
Fig. 5.6 Second level DFD for admin block report	23
Fig. 5.7 Second level DFD for admin division report	24
Fig. 5.8 Second level DFD for user plot report	24
Fig. 5.9 Second level DFD for user block report	25
Fig. 5.10 Second level DFD for user division report	25
Fig. 5.11 ER Diagram	26
Fig. 5.12 R-Schema	27
Fig. 7.1 GeoServer Shapefile Loading Architecture	32

INDEX

List of Abbreviations:

CGI	Common Gateway Interface
CSS	Cascading Style Sheet
DBF	Database File
DHTML	Dynamic Hyper Text Markup Language
EPSG	European Petroleum Survey Group
ESRI	Environmental Systems Research institute.
GIS	Geographic Information System.
GML	Geography Markup Language.
GUI	Graphical User Interface.
HTML	Hyper Text Markup Language.
MIS	Management Information System.
MS4W	Map Server For Windows.
NE-SAC	North Eastern Applications Centre
OGC	Open Geospatial Consortium.
OSS	Open Source Software.
PHP	Hypertext Pre-Processor
QGIS	Quantam GIS
RDBMS	Relational Database Management System
SDBMS	Spatial Database Management System.
SQL	Structured Query Language
WFS	Web Feature Service.
WFS-T	Transactional web Feature Service.
WMS	Web Map Service
WPS	Web Processing Service.

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION	(1-4)
1.1 General overview	
1.2 Purpose	
1.3 Project Profile	
1.3.1 Project Statement	
1.3.2 General Details	
1.4 Organization Overview	
1.5 Methodology	
CHAPTER 2: LITERATURE SURVEY	(5-12)
2.1 What is GIS	
2.1.1 What is web-based GIS	
2.2 Open Source Software	
2.3 Fundamental ways of representing GIS data	
2.4 Open GeoSpatial Consortium	
2.5 Web Map Client	
2.6 Web Map Server	
2.7 GIS-Web Services	
2.8 GIS-Map Services	
2.9 Web Feature Services	
2.10 Problem Definition	
2.11 Existing System	
2.12 Proposed System	
2.13 Scope of the System	
2.14 Scope of the Project	
2.15 System Development Approach	
CHAPTER 3: FEASIBILITY ANALYSIS	13
3.1 Feasibility Study	
CHAPTER 4: SOFTWARE REQUIREMENTS SPECIFICATIONS.....	(14-19)

4.1	Hardware	
4.2	Software	
4.3	Open Source Software	
	4.3.1	What is Open Source
	4.3.2	Why Open Source Software
4.4	PostgreSQL	
4.5	PostGIS	
4.6	GeoServer	
4.7	OpenLayers	
CHAPTER 5: SYSTEM DESIGN	(20-29)
5.1	Introduction	
5.2	System Architecture	
5.3	Development Steps	
5.4	Context Diagram	
5.5	First level DFD	
5.6	Second level DFD	
5.7	Entity Relationship Diagram	
5.8	Relational Schema	
5.9	Data Dictionary	
CHAPTER 6: SOFTWARE TESTING	30
6.1	Introduction	
6.2	Formal Technical Reviews	
6.3	Test Plan	
6.4	Test Cases	
6.5	Test Results	
CHAPTER 7: IMPLEMENTATION STEPS	(31-34)
7.1	Conversion of Shapefile in to SQL database	
7.2	Loading the Shapefile in GeoServer	
CHAPTER 8: RESULT AND DISCUSSIONS	(35-41)
8.1	GUI Components	
	8.1.1	Toolbar
8.2	Timber Volume Estimator	
CHAPTER 9: SUMMARY AND CONCLUSIONS	42
9.1	Summary and Achievements	
9.2	Difficulties Encountered	
9.3	Limitation of the Project	
9.4	Future Scope	